Request for Economic Stimulus Funds

Concept Proposal

Submitters:

E-Health Sub-Committee

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Project Title:

HITECH-*Title XIII- (Sec.13301, Subtitle B, Incentives for the Use of HIT, Sec. 3013)*

Implementing Kentucky Health Information Exchange

Project Partners:

Consumers and state government.

KHIA representing research and comprehensive universities

Regional health information exchanges

Project Background & Purpose:

The purpose of this proposal is to build the infrastructure for a Kentucky e-Health Network.

In 2005, the Kentucky legislature created the first statewide infrastructure to support the implementation of a statewide electronic health information system. This legislation created the Kentucky e-health Network (KeHN) Board and the Kentucky Healthcare Infrastructure Authority KHIA). The KeHN Board comprised of 22 public and private leaders representing universities, healthcare providers, public health, government, employers and consumers oversee e-Health efforts in the state. The Kentucky Healthcare Infrastructure Authority (KHIA)—a partnership of the two leading research universities in Kentucky, the University of Kentucky and the University of Louisville was charged to research HIT and translate the findings of that research to practice. In 2008, the authority expanded participation to include faculty from Eastern Kentucky University, Northern Kentucky University and Morehead State University.

Planning efforts for e-health began in 2006 with the appointment by the KeHN of the e-Health Advisory Group. The group developed an e-Health Action Plan that outlines the objectives and action items necessary for the Kentucky e-Health Network and how those align with regional and national e health efforts.

There has been extensive groundwork in Kentucky for moving to an e-health environment. The state received a federal contract to participate in the Health Information Security and Privacy Collaborative to assess how privacy and security practices and policies affect health information exchange. The KeHN and the CHFS sponsored the e-Prescribing Partnership in Kentucky Grant to implement e-prescribing in diverse areas of the state. Kentucky also participated in multi-state provider education collaborative that resulted in a toolkit to increased provider understanding of HIT.

In 2007, Kentucky secured a $4.9 million Medicaid Transformation Grant that will provide the seed funding for the implementation of the Kentucky Health Information Exchange. As part of the Medicaid Transformation grant, a statewide study of HIT adoption of all providers and a Medical Trading Analysis were conducted to provide guidance for initial HIT implementation. In December 2008, a Request for Proposal (RFP) was issued for the first phase of the Kentucky Health Information Exchange (KHIE). This initial phase focuses on implementing a health information exchange (HIE) for the Medicaid population. A number of regional HIE initiatives are also in various stages of development across the state and three regional health information exchanges (RHIOs), HealthBridge, LouHIE, and the Northeast RHIO in various stages of development that are poised to become part of the KHIE.

Project Description:

The objective of this project is to develop a secure, interoperable electronic health network in Kentucky with the **goal of improving the quality and cost-effectiveness of health care and providing access to useful, timely and accurate health information**. In the past four years, Kentucky has made significant progress toward that goal as outlined in the previous section. The State is now poised to move its e-Health efforts from planning to reality.

The Kentucky e-Health Network is envisioned as a robust public-private collaboration encompassing state, regional, and local components connected to the national health information exchange (NHIN). The state level efforts would provide a baseline set of functions available across the state, oversee a shared technology infrastructure, and ensure interoperability among local efforts. Regional and local efforts would focus on meeting unique needs of medical trading areas and achieving improved health outcomes. Figure 1 provides a model for how the Kentucky e-Health Network would operate and interface with local HIEs or RHIOs, as well as individual purchasers, payors, providers and practitioners in the state.

In the same way that our transportation system involves both the public and private sectors and local, state and national level efforts, so too e-Health is a multifaceted effort with roles and responsibilities for each sector and level of our society. This plan naturally focuses most directly on building the state infrastructure for HIE, but the goal of Kentucky's e-Health efforts is to engage every stakeholder group and every quadrant of the health sector in Kentucky to improve health outcomes. Thus the proposed project would also focus on providing technical assistance, reducing barriers to adoption, implementing strategies to encourage widespread use of HIT, and promoting the use of electronic records for quality improvement and supporting public health.

The plan is to develop a **robust statewide Next Generation Healthcare model**, providing a full array of applications including clinical and administrative applications and tools to improve health and wellness to consumers and communities. The system would include a statewide network over which health care information can be shared in a secure manner with the consent of the patient. This system would be built to interface with existing software and hardware currently used by Kentucky providers. The network would be much like a major highway upon which all types of applications could be pushed to the health care provider. For example, a list of prescription medications and clinic research findings for the particular diagnosis of the patient could be pushed over the network. In addition, selected information can be pushed

from the provider to a specialist upon referral. Providers could retrieve information on the lab results and diagnostic exams such as x-rays that their patient received in the emergency room or urgent treatment center, thus, preventing the repeat of these diagnostic tests and procedures.

The patient may also use "wired" or "wireless" devices at home to continue to monitor his or her disease state from home and transmit data to their medical provider's office to prevent complications before they happen. For example, a wireless glucometer can be used to check a diabetic's blood sugar levels at home. The glucometer would be connected to the patient's provider and the home health agency, allowing both to monitor the blood sugar levels and alert them when results exceed acceptable levels, thus preventing expensive hospitalizations and emergency room visits.

The network would be used to share data for biosurveillance. Intelligent software currently exists and could be used over the network for mining of data to identify an array of symptoms that would indicate the potential exposure to a biological agent typically used in terrorism. Also, data required for public health surveillance of disease could be pushed by the provider to public health departments. This would cut down on costly faxes and paper systems and vastly improve the sensitivity and speed detection of disease. Public health situational awareness could be real time. **The real value to the health care provider is that a well designed connected network will improve the quality of patient care and speed the workflow of the provider's practice**.

The long-term vision for Kentucky's Next Generation Healthcare model would be to provide the latest treatment recommendations to assist providers in making clinical decisions for their patients that are based on current research. Providers will be made aware of potential drug-drug interactions thereby preventing adverse reactions to treatment. This would enable care provided in the most remote part of Kentucky to be equivalent or better than the care provided by world renowned clinics. The amount of research published each year is so vast that it is estimated that a physician would have to read over 20 articles a day everyday in order to keep abreast of the latest clinical research. This provides insight into why it takes approximately 17 years for research to be translated in every day clinical practice. Imagine being able to obtain a predictive health care profile from which to design a customized healthcare and wellness plan designed specifically for the individual based on his or her genetic code rather than the getting health screenings based on one's age (Weston & Hood, 2004). This **Next Generation Healthcare** is possible in the near future with the support of e-health information tools. This approach would improve longevity and quality of life, while decreasing the costs of unnecessary tests and preventing chronic disease. Information technology will serve as the foundation upon which all facets of the health care system can be improved.

The first phase of the state health information exchange is currently in the bidding process to be built with the aid of a $5 million CMS Transformation grant. The plan calls for expanding the network from the initial stage as monies become available. Through stimulus money, it will be possible to accelerate development of the network in collaboration with the regional health information exchanges, universities, and other stakeholders to advance progress at a much more rapid pace.

Project Team (Project Manager(s), Content Experts, Instructional Designers, etc.):

KHIA, State Universities

Project Budget & Amount of Economic Stimulus Funds Requested:

Funding is requested to support both state and regional initiatives. It is based on the belief that the **ultimate goal of using information technology to improve health care quality and efficiency through the authorized and secure electronic exchange and use of health information** can best be achieved through a coordinated, collaborative state-wide effort.

Funding request: $100,000,000

Vision

Healthier Kentuckians through Information Exchange

Mission

The Kentucky e-Health Network*
will support statewide adoption of health information technology and interoperable health information exchange to enhance the health of all citizens.